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EXAMINER

JIANG, SHAOJIA ANNA

ART UNIT	PAPER NUMBER
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1617

DATE MAILED: 01/12/2005

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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/001,558
Filing Date: October 24, 2001
Appellant(s): FAN ET AL.

Karen E. Klumas
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed October 8, 2004.

(1) *Real Party in Interest*

A statement identifying the real party in interest is contained in the brief.

(3) *Status of Claims*

The statement of the status of the claims contained in the brief is correct.

Note that Claims 23-25 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a non-elected invention, as recorded in the previous Office Action April 7, 2004.

(4) *Status of Amendments After Final*

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) *Summary of claimed subject matter*

The summary of claimed subject matter contained in the brief is correct.

(6) *Claims Appealed*

The copy of the appealed claims contained in the Appendix to the brief is correct.

(7) *Prior Art of Record*

5,085,857	Reid et al.	02-1992
Porter et al. (Handbook of Surfactants, pp.145-146,(1991).		

(8) *Grounds of Rejection to be Reviewed on Appeal.*

The following ground(s) of rejection are applicable to the appealed claims:

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The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-7, 13-17, 19-22 and 26-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reid et al. (US 5,085,857) in view of Porter et al. (Handbook of Surfactants, pp.145-146,1991). This rejection is set forth in the prior Office Action mailed April 7, 2004, and reiterated in full below.

Reid et al. (USPN 5,085,857) teaches an aqueous shampoo composition comprising, in addition to water from 2-40% by weight of a surfactant chosen from anionic, nonionic or amphoteric surfactants or mixtures thereof, from 0.01% to 3% by weight of cationic conditioning polymer which is a cationic derivative of guar gum, from 0.01 to 10% by weight of an insoluble, non-volatile silicone, present as emulsified particles with an average particle size of less than 2 micrometers, see col. 1 line 67-col.2, line 8. Suitable anionic surfactants are alkyl sulfates, alkyl ether sulfates, alkaryl sulfonates, alkyl succinates, alkyl sulfosuccinates, N-alkoyl sarcosinates, alkyl phosphates, alkyl ether phosphates, alkyl ether carboxylates, and alpha-olefin sulfonates, see col. 2, lines 24-36. The amphoteric surfactants suitable for use in the composition of the invention are alkyl amine oxides, alkyl betaines, alkyl amidopropyl betaines, alkyl sulfobetaines, alkyl glycinate, alkyl carboxyglycinates, alkyl amphopropionates, alkyl amidopropyl hydroxysultaines, acyl taurates and acyl

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glutamates wherein the alkyl and acyl groups have from 8 to 10 carbon atoms.

Examples include lauryl amine oxide, cocodimethyl sulfopropyl betaine and preferably lauryl betaine, cocamidopropyl betaine and sodium cocamphopropionate, see col.2, lines 58-68. The non-ionic surfactants suitable for use in the composition of Reid et al. are condensation products of aliphatic (C8-C18) primary or secondary linear or branched chain alcohols or phenols with alkylene oxides, usually ethylene oxide and generally 6-30 EO. Other suitable surfactants are mono or di alkyl alkanolamides or alkyl polyglucosides. See col. 2, lines 47-57. Examples include coco mono or diethanolamide, coco mono isopropanolamide, and cocodiglucoside (see particularly col.2, lines 54-55).

Reid et al. further teaches that the cationic conditioning polymer is a cationic derivative of guar gum, e.g., hydroxypropyl trimonium chloride, see col.3, lines 5-28. Reid et al. also teaches that the shampoo composition of its invention also comprises an insoluble non-volatile silicone which may be one or more polyalkyl siloxanes, polyalkylaryl siloxanes or mixtures thereof, specific examples include polydimethyl siloxane, see col. 3 line 31-68. Reid et al. also teaches that the average silicone material in this emulsion is less than 2 micrometers, preferably between 0.01 and 1 micrometer, see col. 4, lines 1-9. Reid further teaches that any surfactant material either alone or in admixture may be used as emulsifiers in the preparation of silicone emulsions. Preferred emulsifiers are anionic emulsifiers, see col. 4, lines 15-37. Reid et al. finally teaches that its shampoo composition may also include perfumes, dyes,

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coloring agents, viscosity modifiers, and herb extracts, see col. 5, lines 1 1-22, see also claims 1-7.

Reid et al. does not teach the particular percentages of the co-surfactant herein. Neither does it particularly teach ethoxylated cocomonoethanolamide.

Porter et al. (Handbook of surfactants, 19.145-146, 1991) teaches that the addition of ethylene oxide to alkanolamides improves dispersability or solubility in water. Porter further teaches that the function of ethoxylated alkanolamides in cosmetic products is similar to alkanolamides as to thickening and foam stabilizing, but possesses improved dispersability, see page 145-146.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to employ co-surfactants in the percentages claimed herein. It would have also been obvious to employ ethoxylated alkanolamides in lieu of alkanolamides.

One of ordinary skill in the art would have been motivated to employ co-surfactants in the percentages claimed herein because the co-surfactants are known to be useful in shampoo composition and optimization of amounts is within the purview of the skilled artisan. The skilled artisan would have been motivated to employ ethoxylated alkanolamides in lieu of alkanolamides, i.e., ethoxylated cocomonoethanolamide in lieu of cocomonoethanolamide because ethoxylation is known to improve dispersibility, therefore resulting in a more uniform emulsion.

(9) Response to Argument

Claim Rejections - 35 USC § 103 Maintained

It is the examiner's position that the present invention is clearly obvious in view of the prior art of record, as discussed below.

Appellants primarily argue that "The Appellants have discovered that the combination of anionic surfactant, ethoxylated cocomonoethanolamide and cationic polymer significantly improves the deposition of such insoluble particles. The improvement in particle deposition provided by the subject invention is neither disclosed nor suggested by Reid et al. in view of Porter et al." (emphasis added originally, see Appellants' brief, page 8). Appellants also assert that "there is no disclosure or suggestion that the incorporation of ethoxylated coconut monoethanolamide would provide any benefit whatsoever with respect to the deposition of the silicone conditioning agents." (emphasis added originally, see Appellants' brief, page 9).

Appellants' arguments herein are not found persuasive. As discussed in the previous Office Action, the examiner notes that Reid et al. does not teach the employment of ethoxylated coconut monoethanolamide but exemplifies compositions comprising coconut monoethanolamide in 1.5% wt and 0.5% wt (see Examples 4-5, respectively).

Nevertheless, Porter et al. (Handbook of surfactants, 19.145-146, 1991) is deemed to clearly provide the motivation for the use of ethoxylated coconut monoethanolamide as claimed herein by teaching that the addition of ethylene oxide to alkanolamides improves dispersability or solubility in water. Note that ethoxylated

coconut monoethanolamide with 5EO is taught as a specific example (see Porter, page 145, "Example").

Moreover Porter et al. teaches that the function of ethoxylated alkanolamides in cosmetic products is similar to alkanolamides as to thickening and foam stabilizing, but possesses improved dispersability (see page 146, "Applications"). More importantly Porter et al. provide the factual evidence that the data in "Table 7.16" demonstrate the improved solubility and dispersability in water of the ethoxylated monoethanolamide with 2EO and 5EO, compared to monoethanolamide without EO which is insoluble in water (see page 146). Note that 2EO and 5EO of ethoxylated monoethanolamide are within the claimed range of 2-12 of EO.

Therefore, the properties and benefit of ethoxylated alkanolamides are well known and art recognized. One of ordinary skill in the art would have found it obvious to employ ethoxylated cocomonoethanolamide in lieu of cocomonoethanolamide based on the Handbook teachings of Porter et al.

Further, Appellants' argument and explanation of the data in Examples 1-3 at pages 12-18 in the specification herein have been fully considered but are not deemed persuasive as to the nonobviousness and/or unexpected results of the claimed invention over the prior art. Appellants mainly argue that ethoxylated cocomonoethanolamide significantly increase silicone deposition on hair, i.e., increasing the size of silicone (see Appellants' brief, page 10-11). It is noted that the feature upon which applicant relies, i.e., ethoxylated cocomonoethanolamide increasing silicone deposition on hair, is not recited in the rejected claim(s). Thus, it is irrelevant whether

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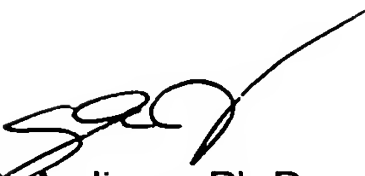
the reference includes those features or not. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Therefore, the results of ethoxylated cocomonoethanolamide increasing silicone deposition on hair are not relevant to the claimed features herein.

Appellants are reminded that the instant claims merely recite a composition wherein the limitation "about 0.1 to about 30% by weight of water insoluble components with an average particle size of less than 2 μm " is clearly met by the disclosure of Reid et al. that "0.01 to 10% by weight of an insoluble, non-volatile silicone, present as emulsified particles with an average particle size of less than 2 μm " (see Reid et al. col.2 lines 6-9).

As discussed in the previous Office Action, evidence as to unexpected benefits must be "clear and convincing" *In re Lohr*, 137 USPQ 548 (CCPA 1963), and be of a scope reasonably commensurate with the scope of the subject matter claimed, *In re Linder*, 173 USPQ 356 (CCPA, 1972). Thus, Appellants' examples in the specification herein are not seen to show any clear and convincing unexpected results in support the nonobviousness of the instant claimed invention over the prior art.

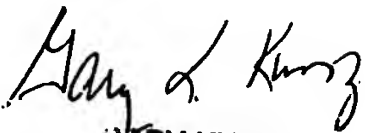
For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

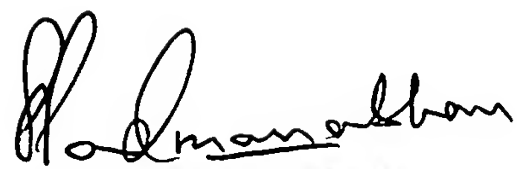


S. A. Jiang, Ph.D.
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January 7, 2005

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